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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,842	06/27/2003	Jen-De Chen	SUND 468	4815

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EXAMINER	
GUTIERREZ, ANTHONY	
ART UNIT	**PAPER NUMBER**
2857	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/606,842	CHEN ET AL.	
	Examiner	Art Unit	
	Anthony Gutierrez	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *6/27/03* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The abstract of the disclosure is objected to because it contains more than 150 words. Correction is required. See MPEP § 608.01(b).

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The title is generic and fails to address the claimed subject matter that distinguishes the present invention from the prior art.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 4, 6, and 8, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ha (US Patent Application Publication US 2003/0204656 A1), in view of Chen et al. (US Patent 6,480,907 B1), further in view of Fox (US Patent 4,618,920).

Ha discloses a testing card, which is used to be coupled to a card interface installed in an electronic device, specifically a PDA, to test a function of the card interface, wherein the card interface complies with an interface specification, specifically PCMCIA, and the testing card comprises (paragraphs 0017 and 0040): a converting circuit which is used to receive, convert and output an attribute control signal, a common memory signal and an I/O signal fed in from the card interface (paragraph 0027); a latch circuit which is used to receive a data signal fed in from the card interface, latch the data signal and have the data signal outputted afterwards (paragraphs 0019 and 0021); a data processor, specifically a flash memory, which is coupled to the converting circuit and the latch circuit and is used to proceed with testing according to the data signal and the signal outputted from the converting circuit (paragraph 0022); a signal generator which is used to output a mode selection signal and an interrupt signal to the card interface, generate and output an enable signal according to a control signal fed in from the card interface (paragraphs 0021 and 0026); and a coupled reset circuit (paragraphs 0019 and 0026).

Ha does not specifically disclose an oscillation combination circuit, for generating a wait signal involved in testing.

Chen et al., however, discloses the importance of testing the WAIT signal line of the PCMCIA socket since it is used to extend the Bus Access Cycle when the communication speed specified by a connected computer or functional card is not fast enough (col. 1, lines 1-65, specifically, lines 28-40).

It therefore would have been obvious to one of ordinary skill in the art at the time of invention to include a WAIT signal, as taught by Chen et al., in the testing card of Ha,

in order to test all significant connections in the PDA interface, ensuring that data can be properly transmitted and received to the PDA from a PCMCIA connection.

Neither reference specifically teaches that the WAIT signal is generated by an oscillation combination circuit, nor that it is a square wave signal.

Fox, however, discloses using an oscillation combination circuit (col. 1, lines 43-49, and col. 2, lines 53-59) for generating a WAIT signal (col. 2, lines 44-49, and col. 4, lines 5-7), including a square wave signal (Fig. 2). Fox teaches that this circuit prohibits half-pulses and glitches (col. 2, lines 61 and 62) provides stability that is nearly as good as a crystal oscillator (col.1, lines 43-46), and provides frequency adjustment without the need for a variable main frequency oscillator (col.1, lines 66-68).

It therefore would have been obvious to one of ordinary skill in the art at the time of invention to use an oscillation combination circuit, as taught by Fox, for generation of the WAIT signal employed in the combination of Ha and Chen et al., in order to provide greater stability to the signal without the need for specialized equipment, allowing more accurate testing of the PCMCIA interface connection.

5. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ha (US Patent Application Publication US 2003/0204656 A1), in view of Chen et al. (US Patent 6,480,907 B1), further in view of Fox (US Patent 4,618,920), still further in view of McLeod et al. (US Patent Application Publication US 2003/0073915 A1).

The combination of Ha, Chen et al., and Fox discloses a testing card involving a card interface installed in a PDA.

None of the references specifically teach the use of WinCE OS or a compact flash card.

McLeod et al., however discloses a PDA that adopts WinCE operating system (paragraph 0030), and the use of a compact flash card (paragraph 0045).

McLeod discloses that a benefit of using WinCE is that it facilitates ease of use of a display unit in a PDA, and that a benefit of a compact flash card is that it allows removable memory that can be later reviewed or transferred to processing equipment.

IT therefore would have been obvious to one of ordinary skill in the art at the time of invention for the PDA of the combination, as addressed above, with respect to Ha, Chen et al., and Fox, to employ WinCe, in order to reduce the requirement of mechanical switches involved in the device.

It would also have been obvious to one of ordinary skill in the art at the time of invention for the PDA of the combination, as addressed above, with respect to Ha, Chen et al., and Fox, to employ a compact flash card in order to increase permanent data storage capabilities and provide easier transfer of data contained in the device.

6. Claim 7, is rejected under 35 U.S.C. 103(a) as being unpatentable over Ha (US Patent Application Publication US 2003/0204656 A1), in view of Chen et al. (US Patent 6,480,907 B1), further in view of Fox (US Patent 4,618,920), still further in view of Kamiya et al. (US Patent 4,888,585).

The combination, as addressed above, with respect to Ha, Chen et al., and Fox discloses a testing card that involves control signals for the transmission of information in an input/output (I/O) interface.

The combination does not specifically teach that the control signals are negative trigger signals.

Kamiya et al., however discloses the use of negative trigger signals for information signal transmission in an input/output interface (col. 4, lines 8-35) and teaches that a benefit of the method of invention is that large amounts of information can be transmitted rapidly and readily with simplified construction and reduced cost (Abstract).

It therefore would have been obvious to one of ordinary skill in the art at the time of invention to use negative trigger signals, as taught by Kamiya et al., as control signals of the combination of Ha, Chen et al., and Fox, in order to transmit large amounts of data rapidly and easily, thereby allowing quicker and more accurate testing of the PCMCIA interface connection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

United States Patent Application Publication US 2004/0268194 A1 to Kao et al., discloses a test card for multiple functions testing.

US Patent 6,536,670 B1 to Postman et al. discloses a PCMCIA interface card for coupling PDA's.

US Patent 6,370,594 B1 to Chang et al., discloses a method for testing data pins of a parallel communication port, including attribute memory, common memory., and I/O space.

US Patent 6,148,347, to Finch et al. discloses a mode selectable memory controller for PCMCIA and non-standard cards.

US Patent 6,064, 721, to Mohammadian et al. discloses a modular test instrument for a user interface.

US Patent 5,818,029 to Thomson discloses a method for connecting PCMCIA cards to computer interfaces that includes many of the elements of the presently claimed invention.

US Patent 5,5,61,628 to Terada et al. discloses an IC card and method for parallel processing flash memories.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Gutierrez whose telephone number is (571) 272-2215. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AG

Anthony Gutierrez

3/21/05

MARC S. HOFF
SUPERVISORY PATENT EXAMINER
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